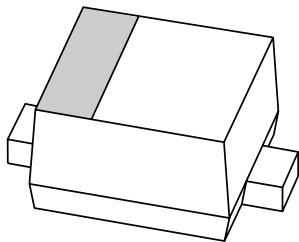


DATA SHEET



PMEG3002AEB

Low V_F MEGA Schottky barrier diode

Product specification

2002 May 06

Low V_F MEGA Schottky barrier diode

PMEG3002AEB

FEATURES

- Forward current: 0.2 A
- Reverse voltage: 30 V
- Very low forward voltage
- Ultra small SMD package.

APPLICATIONS

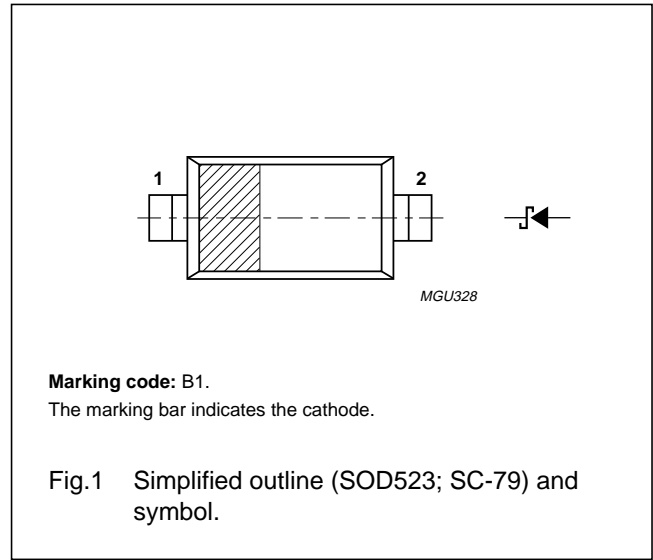
- Ultra high-speed switching
- High efficiency DC/DC conversion
- Voltage clamping
- Inverse-polarity protection
- Low voltage rectification
- Low power consumption applications.

DESCRIPTION

Planar Maximum Efficiency General Application (MEGA) Schottky barrier diode with an integrated guard ring for stress protection, encapsulated in a SOD523 (SC-79) ultra small SMD plastic package.

PINNING

PIN	DESCRIPTION
1	cathode
2	anode



LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 60134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V_R	continuous reverse voltage		–	30	V
I_F	continuous forward current		–	200	mA
I_{FRM}	repetitive peak forward current	$t_p \leq 1$ s; $\delta \leq 0.5$	–	300	mA
I_{FSM}	non-repetitive peak forward current	$t_p = 8.3$ ms half sinewave; JEDEC method	–	1	A
T_{stg}	storage temperature		–65	+150	°C
T_j	junction temperature		–	125	°C
T_{amb}	operating ambient temperature		–65	+125	°C

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ELECTRICAL CHARACTERISTICS

$T_{amb} = 25\text{ }^\circ\text{C}$; unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	TYP.	MAX.	UNIT
V_F	continuous forward voltage	see Fig.2			
		$I_F = 0.1\text{ mA}$	130	190	mV
		$I_F = 1\text{ mA}$	190	250	mV
		$I_F = 10\text{ mA}$	255	300	mV
		$I_F = 100\text{ mA}$	355	400	mV
	$I_F = 200\text{ mA}$	420	480	mV	
I_R	continuous reverse current	$V_R = 10\text{ V}$; see Fig.3; note 1	2.5	10	μA
C_d	diode capacitance	$V_R = 1\text{ V}$; $f = 1\text{ MHz}$; see Fig.4	20	25	pF

Note

1. Pulsed test: $t_p = 300\text{ }\mu\text{s}$; $\delta = 0.02$.

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	note 1	450	K/W

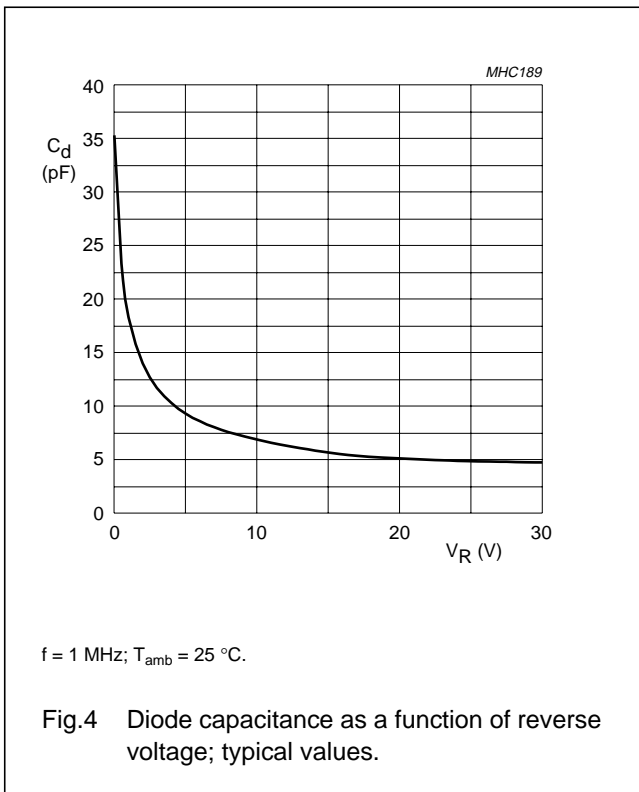
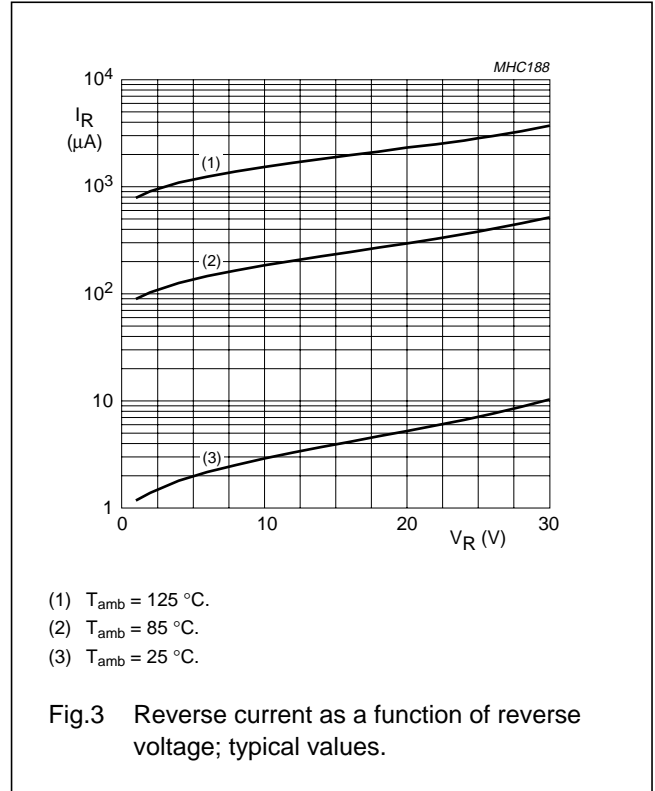
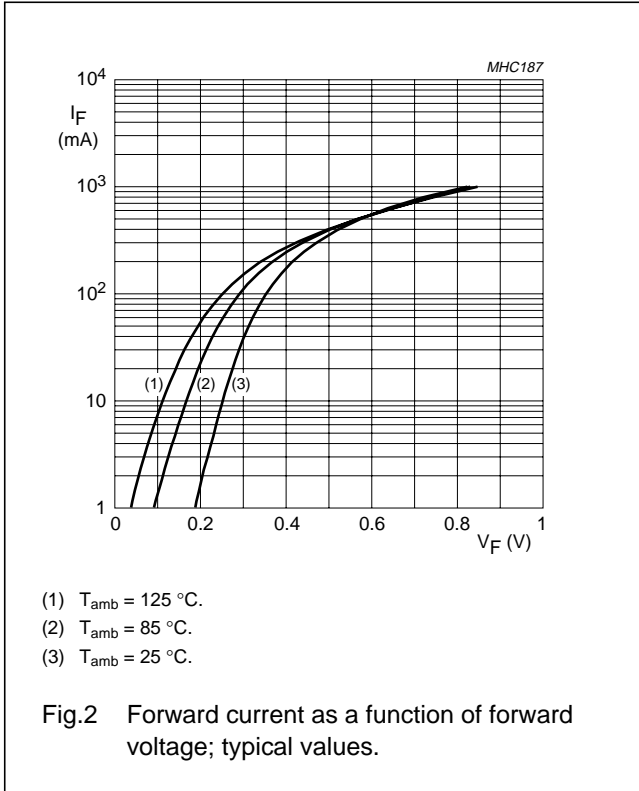
Note

1. Refer to SOD523 (SC-79) standard mounting conditions.

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GRAPHICAL DATA



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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD523

DIMENSIONS (mm are the original dimensions)

UNIT	A	b_p	c	D	E	H_E	v
mm	0.7 0.5	0.35 0.25	0.2 0.1	1.3 1.1	0.9 0.7	1.7 1.5	0.15

Note
1. The marking bar indicates the cathode.

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOD523			SC-79		98-11-25

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DATA SHEET STATUS

DATA SHEET STATUS ⁽¹⁾	PRODUCT STATUS ⁽²⁾	DEFINITIONS
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NOTES

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